

The type and number of the prey caught depends more on the availability of these animals during certain seasons rather than any particular preference.

DEPARTMENT OF ZOOLOGY,
M.S. UNIVERSITY,
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12. FURTHER STUDIES ON INDIAN SPIDERS OF THE GENUS *CYRTARACHNE* (FAMILY ARGIOPIDAE)

(With four text-figures)

INTRODUCTION

The Oriental spiders of the genus *Cyrtarachne* were first described by Thorell (1895). Pocock (1900) recorded two known and one new species. Tikader (1960) revised the Indian spiders of this genus and recorded two known and three new species.

Recently, I have received from my friend Dr. F. Schmid, some interesting spiders of the genus *Cyrtarachne* collected by the Swiss/Indian Zoological Expedition 1960-61. He made this collection from Assam and NEFA. during his Trichoptera collection tour. I have also made some collection of spiders of this genus from Maharashtra and Mysore States.

While examining the above-mentioned material of spiders, I came across four new and three known species. The present paper contains descriptions of the four new species. The type specimens will, in due course, be deposited in the collections of the Zoological Survey of India, Calcutta.

Cyrtarachne inaequalis Thorell

Cyrtarachne inaequalis Thorell, 1895, Spiders of Burma, London : 201 ; Pocock, 1900, Fauna Brit. India, Arach. : 229 ; Tikader, 1960, *J. Bombay nat. Hist. Soc.* 57 (3) : 548.

Material: 1 ♀ from Songpekmum, Manipur, Assam, 1-9-1960. Coll. Dr. F. Schmid.

Distribution: Burma: Toungoo and Tharrawaddy; India: West Bengal, Balaghat, Madhya Pradesh, Songpekmum, Manipur, Assam.

Cyrtarachne raniceps Pocock

Cyrtarachne raniceps Pocock, 1900, Fauna Brit. India, Arach. : 229 ; Tikader, 1960, *J. Bombay nat. Hist. Soc.* 57 (3) : 550 ; 1963, *J. Poona University* 23 : 41.

Material: 1 ♀ from Kotigehar, Dist. Chikmagalur, Mysore, 29-12-1960. Coll. B. K. Tikader.

Distribution: India: West Bengal, Mysore; Ceylon.

Cyrtarachne gravelyi Tikader

Cyrtarachne gravelyi Tikader, 1960, *J. Bombay nat. Hist. Soc.* 57 (3) : 553.

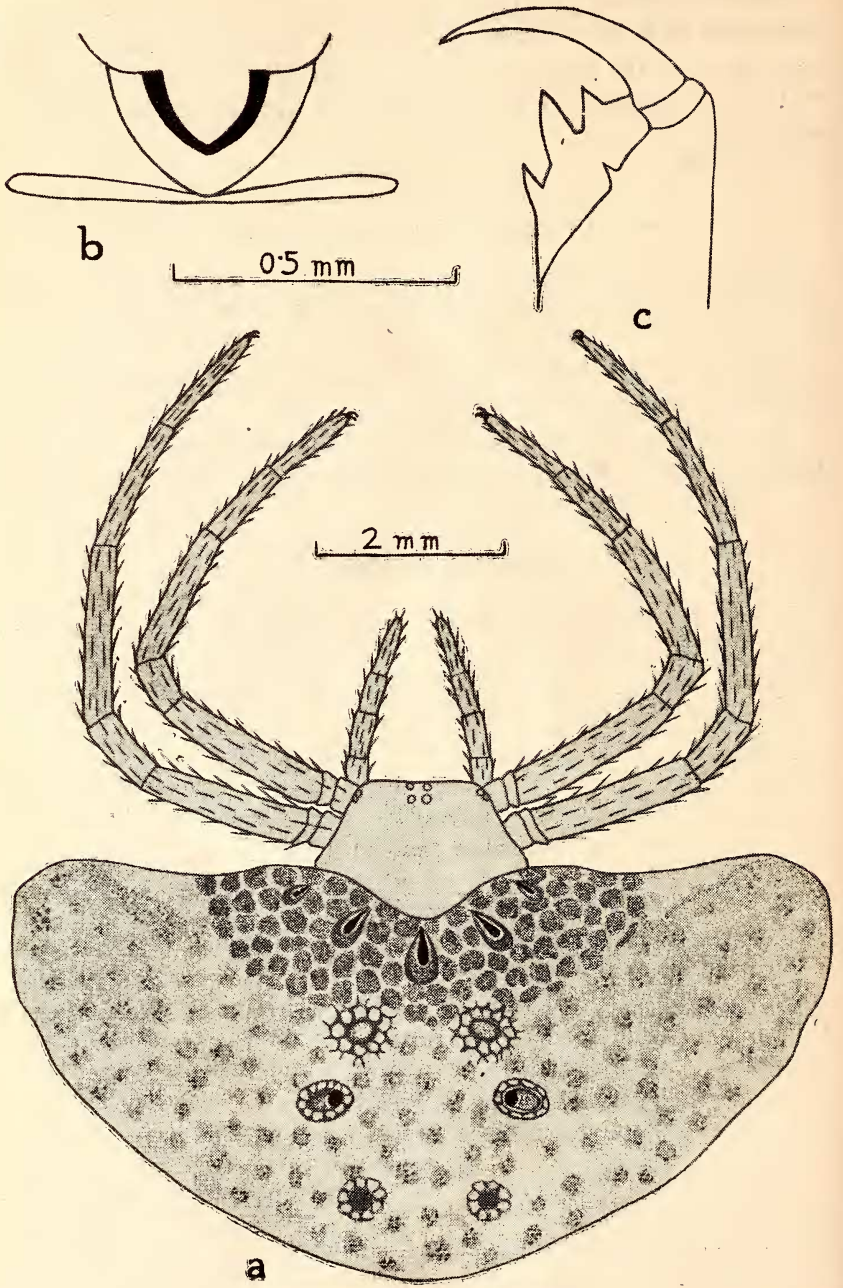
Material: 1 ♀ from Khaorang, Manipur, Assam, 28-8-1960. Coll. Dr. F. Schmid.

Distribution: India: Pashok, Dist. Darjeeling, West Bengal (Type locality), and Manipur, Assam.

Cyrtarachne avimerdaria sp. nov.

General: Cephalothorax and legs light brown, abdomen chocolate in colour. Total length 5.10 mm. Carapace 2.00 mm. long, 2.20 mm. wide; abdomen 3.70 mm. long, 8.50 mm. wide.

Cephalothorax: Relatively broader in front, slightly wider than long. Ocular quad slightly longer than wide, median eyes encircled by a black ring on the base, lateral eyes smaller than medians. Clypeus narrow. Chelicerae subapically with outer row of three large



Text-fig. 1. *Cyrtarachne avimerdaria* sp. nov.
a. Dorsal view of female; b. Epigyne; c. Chelicera

teeth and inner row only one small tooth. Text-fig. 1, *c*. Sternum heart-shaped, pointed behind. Legs short, clothed with hairs.

Abdomen: Strongly rounded posteriorly and overlapping the posterior region of cephalothorax in front, much wider than long, dorsal surface provided with brown granular patches but anterior portion deeper than the other parts of abdomen and the antero-lateral portion also provided with a pale patch. Epigyne V-shaped at the base as in Text-fig. 1, *b*.

Holotype: One female in spirit.

Type-locality: Cherrapunji, Assam, 15-10-1960. Coll. Dr. F. Schmid.

This species resembles *Cyrtarachne bengalensis* Tikader but is readily separated as follows: (i) Abdomen chocolate colour and strongly rounded posteriorly and dorsal surface provided with brown granular patches, but in *C. bengalensis* abdomen uniform chocolate colour and moderately rounded posteriorly. (ii) Chelicerae subapically with outer row of three large teeth and inner row with only one small tooth, but in *C. bengalensis* chelicerae with outer row of three large and inner row of three small teeth.

Cyrtarachne schmidi sp. nov.¹

General: Cephalothorax and legs light yellowish, abdomen light greenish. Total length 4.80 mm. Carapace 1.50 mm. long, 2.00 mm. wide; abdomen 3.50 mm. long, 8.00 mm. wide.

Cephalothorax: Relatively broad in front, wider than long. Ocular quad square, lateral eyes smaller than medians. Clypeus narrow. Chelicerae subapically with outer row of three medium size teeth and inner row of two small teeth. Text-fig. 2, *f*. Sternum heart-shaped, pointed behind. Legs short, clothed with hairs.

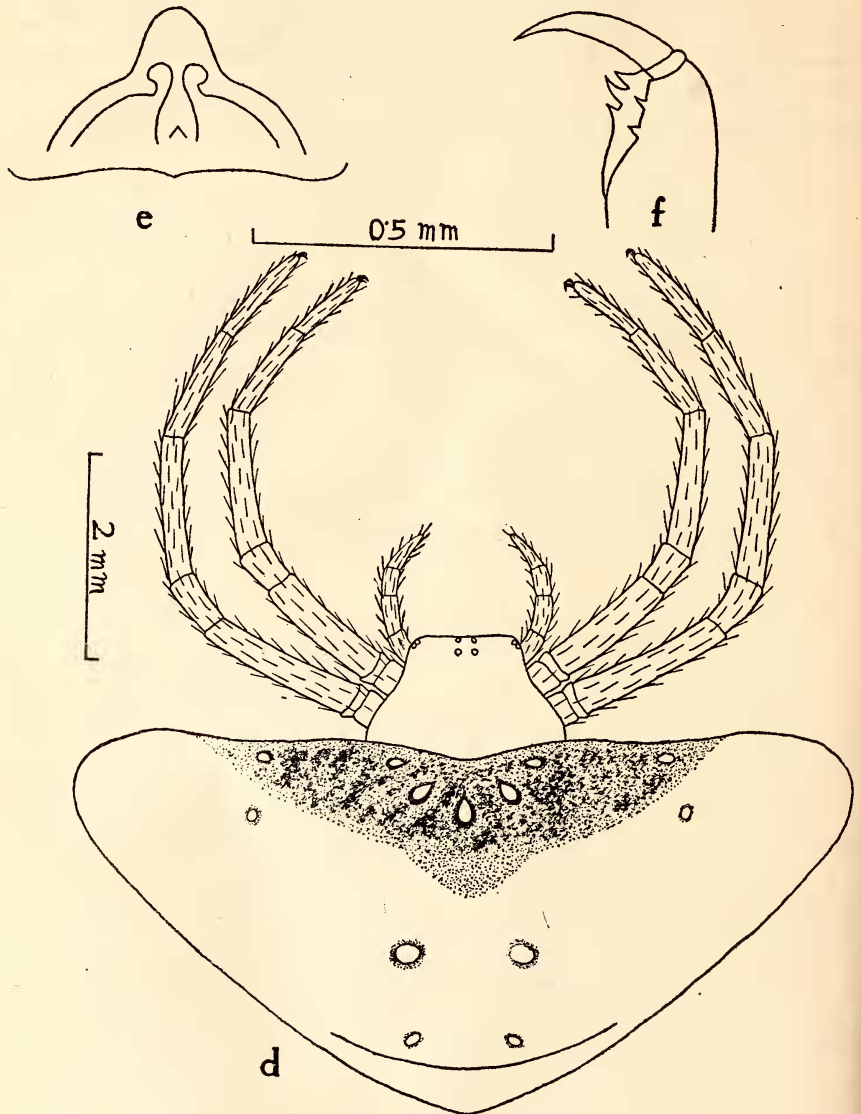
Abdomen: Wider than long, triangular, strongly overlapping the posterior region of cephalothorax in front; broadest in its anterior half. When living abdomen dark, greenish brown with a narrow yellowish belt laterally and posteriorly. Almost all sigilla yellow in centre and encircled by brown patch. Epigyne as in Text-fig. 2, *e*.

Holotype: One female in spirit.

Type-locality: Amatulla Kameng (NEFA.), India, alt. 1500 feet (c. 460 m.), 18-10-1961. Coll. Dr. F. Schmid.

¹I have pleasure in naming this species after Dr. F. Schmid, who made this collection.

This species is closely allied to *Cyrtarachne biswamoyi* Tikader but differs as follows: Abdomen wider than long and triangular in shape,

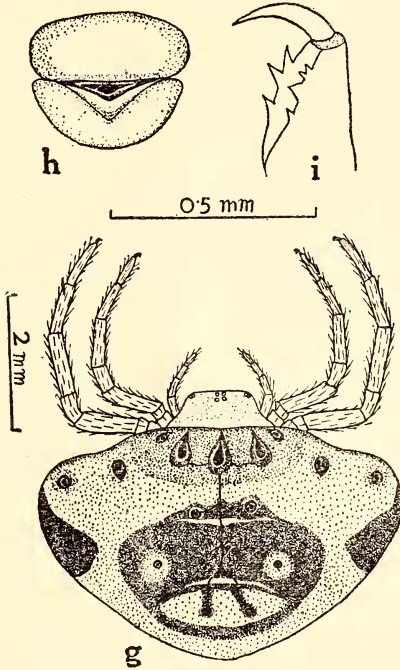


Text-fig. 2. *Cyrtarachne schmidi* sp. nov.
d. Dorsal view of female; e. Epigyne; f. Chelicera

but in *C. biswamoyi* abdomen wider than long and widely rounded posteriorly, dorsal surface armed with a few symmetrically placed tooth-like tubercles.

Cyrtarachne sundari sp. nov.

General: Cephalothorax, legs and abdomen brownish red. Total length 4.00 mm. Carapace 1.00 mm. long, 1.60 mm. wide; abdomen 3.50 mm. long, 5.50 mm. wide.



Text-fig. 3. *Cyrtarachne sundari* sp. nov.

g. Dorsal view of female ; h. Epigyne ; i. Chelicera

Cephalothorax: Relatively broader in front, slightly wider than long. Ocular quad slightly longer than wide, lateral eyes smaller than medians. Clypeus narrow. Chelicerae subapically with outer row of three large teeth and inner of four small teeth. Text-fig. 3, i. Sternum heart-shaped, pointed behind. Legs short, clothed with hairs.

Abdomen: Moderately rounded posteriorly, strongly overlapping the posterior region of cephalothorax in front, wider than long, the anterior lateral and mid-dorsal areas furnished with dark brown patches. All sigilla prominent and encircled by a yellowish ring. Epigyne as in Text-fig. 3, h.

Holotype: One female in spirit.

Type-locality: Poona University Compound, Maharashtra, 6-9-1962. Coll. B. K. Tikader.

This species resembles *Cyrtarachne bengalensis* Tikader but is separated as follows: (i) Abdomen brownish red and the anterior lateral and mid-dorsal areas furnished with dark brown patches, but in *C. bengalensis* abdomen pale chocolate colour and anterior lateral extremities with a white patch; (ii) Chelicerae subapically with outer row of three large teeth and inner row of four small teeth, but in *C. bengalensis* outer row of chelicerae with three large teeth and inner row with three small teeth.

***Cyrtarachne promilai* sp. nov.**

General: Cephalothorax light brown, legs light greenish, and abdomen dark or deep brown. Total length 5.00 mm. Carapace 1.50 mm. long, 2.40 mm. wide; abdomen 4.00 mm. long, 7.00 mm. wide.

Cephalothorax: Relatively broader in front, wider than long. Ocular quad as long as wide, lateral eyes small. Chelicerae subapically with outer row of three large teeth and of two small teeth. Text-fig. 4, l. Clypeus narrow. Sternum heart-shaped pointed behind. Legs short, clothed with hairs.

Abdomen: Wider than long, nearly pentagonal in shape strongly overlapping the posterior region of cephalothorax in front, broadest in its anterior half. Almost all sigilla yellow in centre and encircled by black patch. Epigyne simple as in Text-fig. 4, k.

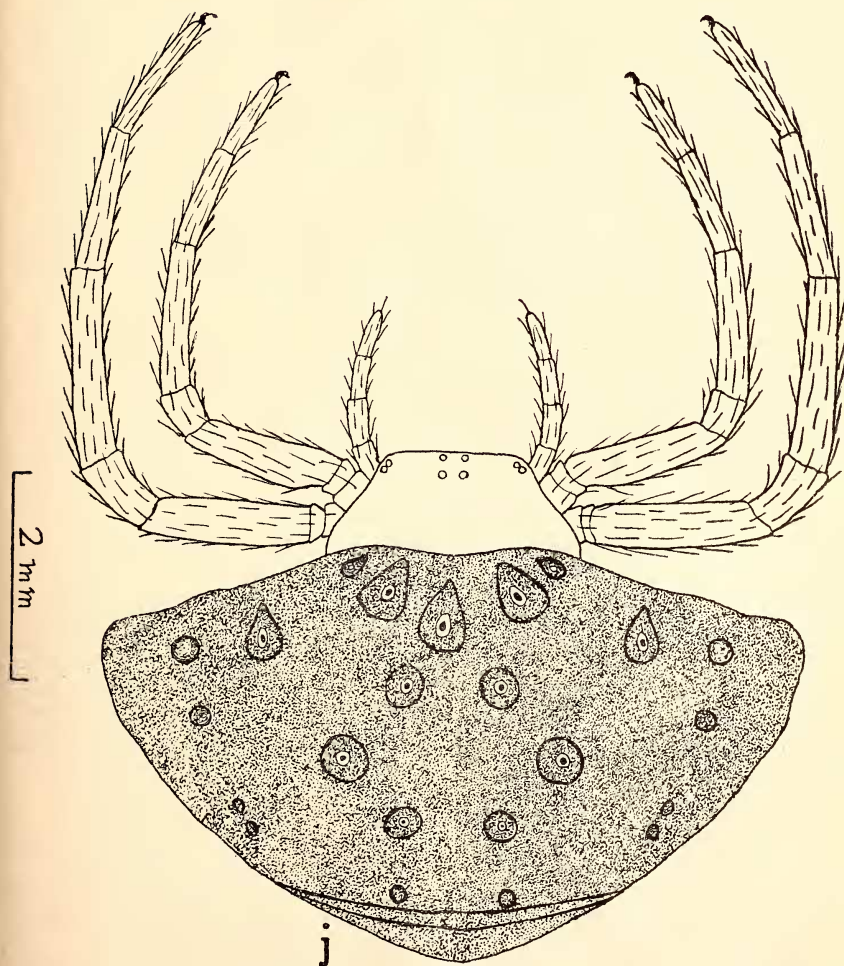
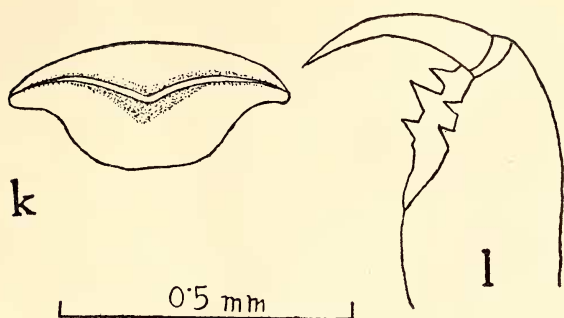
Holotype: One female in spirit.

Type-locality: Poona University Compound, Maharashtra, 6-9-1962. Coll. B. K. Tikader.

This species resembles *Cyrtarachne biswamoyi* Tikader but is readily separated as follows: (i) Abdomen wider than long and pentagonal in shape and dark or deep brown colour, but in *C. biswamoyi* abdomen wider than long and armed above with a few symmetrically-placed tooth-like tubercles; (ii) Abdomen deep brown, but in *C. biswamoyi* abdomen light yellowish grey.

SUMMARY

Four new and three known species of Indian spiders of the genus *Cyrtarachne*, family Argiopidae, are recorded in this paper. All specimens were collected from Assam, NEFA, Maharashtra, and Mysore, India.



Text-fig. 4. *Cyrtarachne promilai* sp. nov.
j. Dorsal view of female; k. Epigyne; l. Chelicera

ACKNOWLEDGEMENT

I am thankful to Dr. F. Schmid, who kindly made some of the interesting collection of *Cyrtarachne* spiders available for my studies.

WESTERN REGIONAL STATION,
ZOOLOGICAL SURVEY OF INDIA,
POONA,
December 27, 1962.

B. K. TIKADER

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13. NOTES ON A COLLECTION OF TICKS WITH A NEW HOST RECORD OF *HYALOMMA AEGYPTIUM FEROSDENI* SHARIF (IXODIDAE)

Recently I had an opportunity to study a small collection of Ixodid ticks received from the Head of the Department of Zoology, Panjab University, Chandigarh. The material includes: (i) *Hyalomma aegyptium ferozdeni* Sharif—2 ♂♂, Chandigarh, Panjab (off donkey), 15-7-1961; (ii) *Hyalomma aegyptium aegyptium* (Linnaeus)—8 ♂♂, 4 ♀♀, Ferozapore, Panjab (off camel) 30-7-1961; (iii) *Rhipicephalus sanguineus* (Latreille)—4 ♂♂, 2 ♀♀, Chandigarh, Panjab (off donkey), 15-7-1961.

Four subspecies of *Hyalomma aegyptium* (Linnaeus) are known, viz. *H. aegyptium aegyptium* (Linn.), *H. aegyptium dromedari* Koch, *H. aegyptium isaaci* Sharif, and *H. aegyptium ferozdeni* Sharif. Sharif (1928) reviewed the taxonomy, distribution, and hosts of these subspecies.

H. aegyptium ferozdeni Sharif (1928) was described from 3 ♂♂, and 1 ♀ specimen, found to be parasitic on cattle from Sasaram, Shahabad District, Bihar. Sharif also recorded it on cow (Chatra, Hazaribagh District, Bihar), on pony (Sasaram, Shahabad District, Bihar), and on buffalo (Porahat, Singhbhum District, Bihar). According to Sen (1938) cattle (*Bos indicus*), buffalo (*Bubalus bubalis*), and horse (*Equus caballus*) only are the hosts of *H. aegyptium ferozdeni*.